

# McGill reporter

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## McGILL RESEARCHERS DISCOVER IMPORTANT NEW CANCER TEST

by D. Sankoff

A cancer research project at the McGill Medical Clinic of the Montreal General Hospital may result in a quick, easy to perform and reliable blood test for adenocarcinoma of the human digestive system, including cancer of the colon and rectum. Currently involved in the project are Drs. Phil Gold, Samuel O. Freedman, John Krupey and David M. P. Thomson.

Five years ago, Drs. Gold and Freedman found that all adenocarcinomas, or at least all that they tested, contained a substance specific to that type of tumour, and not present in normal tissues. They later detected the presence of the same substance in the tissues of the digestive organs of human embryos up to the sixth month of gestation. Because the substance is antigenic, i.e. it can stimulate the production of antibodies, they named it "carcinoembryonic antigen," or CEA.

CEA is composed partly of protein and partly of a carbohydrate component. The researchers have been able to extract about ten milligrams of highly purified CEA from each kilogram of tumour, and have been able to study its physical-chemical properties. The amino acids making up the protein portion, and some of the carbohydrates have been identified. The researchers are presently trying to split the antigen to find its smallest active sub-units, prior to determining the chemical make-up of these sub-units.

On the cellular level, CEA seems to be located on the surface of the cell. This discovery, published last year, shows that the CEA are likely to be involved in extra-cellular interactions, such as between individual cells and between tumour cells and the bloodstream. This fact helps explain the success of the blood test procedure. Presently, the Clinic scientists are studying the formation of CEA within the cell and its transport and location outside the cells by electron microscopy and by immunofluorescent techniques.

The latter method consists of obtaining antibodies to CEA, "labelling" these antibodies by making them react with a fluorescent chemical, and introducing the labelled material into the cell preparation. The antibodies react with and are bound to, the CEA, and a microscopic visual or photographic search for a fluorescent glow in or on cells betrays the location of CEA.

Using electron microscope techniques he learned in New York last year, Dr. Gold has been able to follow the formation of CEA vesicles or sacs within the cell, their movement toward the surface and subsequent extrusion onto the surface. This work is still in progress, and will hopefully be published in the near future.

As yet nobody knows the specific actions or functions of CEA for the tumour cell, although the McGill researchers do make some hypotheses. Current theories of cell development and differentiation postulate that embryonic tissue and tissue responsible for the production of new cells in mature individuals tends to be relatively undifferentiated. In other words, the cells of these tissues do not display the same diversity with respect to structure or function as do mature tissues. The undifferentiated cells have the ability to reproduce by fission quite frequently and often have the potential of developing into two or more different types of mature cell. As development proceeds, differentiation into distinct cell types occurs and the ability to divide and other potentials are repressed. The structure and function of the cell are specifically and strictly channeled and controlled, although each cell still has all the genetic information in its chromosomes to describe and direct the behaviour of all the different types of cells. A repression and control mechanism blocks most of this information and potential so that the cell can exclusively carry out its proper function.

Whatever the mechanism of carcinogenesis (the development of cancer), tumour tissues display many characteristics resembling embryonic or undifferentiated tissue, the most obvious being the ability to divide at a tremendous rate. This division increases the number of cells, the tumour grows, blocking the function of normal tissue and depriving the rest of the body of nourishment until either death ensues or the tumour is removed or checked. Further, cancer cells display structural and biochemical characteristics of undifferentiated cells. The presence of CEA in both embryonic tissue and in adenocarcinomas is one more example of this phenomenon. The McGill workers think that the origin of adenocarcinomas involves the de-differentiation of a normal cell and

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The discovery of vast quantities of oil in the Arctic has forced Canada to look toward its northern frontier with greater interest than ever before.

Traditionally, McGill has fostered much of the scientific interest given to the North within this country. Such disciplines as geography, geology, marine sciences, mining, engineering, sociology and anthropology have contributed much to the limited knowledge that exists about our northern expanse and its inhabitants.

This article by Science Editor, Tom Paskal, serves to introduce a continuing series concerning various aspects of northern study and research. [Editor]

## BLACK GOLD

### Some Facets of the Arctic Oil Rush

By TOM PASKAL

In February 1968 a dentist in Fairbanks purchased a lease option on several hundred acres of land for five thousand dollars. He recently sold that same option for one million dollars.

Oil companies will spend between one and two billion dollars on Arctic explorations alone within the next ten years. The North is a treasure house of oil, gas and minerals.

Almost every large oil company in the world has a stake in Arctic oil, but Canada will make only peripheral profits from the wealth to be taken from her soil. England and Holland stand to make more profit than Canada herself. This country's major involvement is a consortium composed of the federal government and a group of private companies which has leased land on Melville Island in the Arctic Ocean.

British Petroleum, half owned by Britain, and Shell Oil Ltd., a Dutch corporation, have greater investments in Canadian Oil than does Canada.

A New York based consortium of oil interests is financing a trip of the icebreaker-tanker Manhattan through the North West Passage. This comparatively small project, designed to test the feasibility of shipping oil through the Passage, will cost more than Canada's total investment in oil exploration.

The largest single investor offshore the Canadian Arctic is the American Hunt family interests.

After all the known prime land had been leased to companies throughout the world, Canada finally clamped down and since March is granting no more leases.

### INTERNATIONAL POLITICS ALTERED

The oil finds are going to alter spheres of influence in world politics.

Apart from food, oil will become the largest single industry and oil companies will hold a greater concentration of power than any other industry.

Until now, the Middle East held 60% of the world's oil reserves. The

Arctic contains more oil than the Mid-East.

Given that the Mid-East and Biafran situations are strongly affected by oil interests, the introduction of an alternate source allows greater play for political pressures.

The large oil discoveries on national property, such as American finds in Alaska, do not simplify the politics of oil. For example, Venezuela supplies all oil to Eastern Canada. British Petroleum recently bought a chain of 500 gas stations in the USA to sell its oil. And Alaskan oil is closer to Britain than it is to New York.

American firms in general are interested in oil because of its unique tax advantages. Exploratory rigs are entirely tax deductible and the first 21½% of oil income is tax exempt; a tax advantage which according to the New York Times costs the US treasury 1.6 billion dollars a year.

So here we see how tax law loopholes affect world politics. The investment advantage of oil creates greater American interest and encourages the further deployment of American political influence.

The politics of oil are shaping our future in other ways.

The first major oil find was on the North East side of Alaska. To get the oil to the States, the easiest way would be to ship it around Alaska, through the Bering Straits, and down the Western Seaboard.

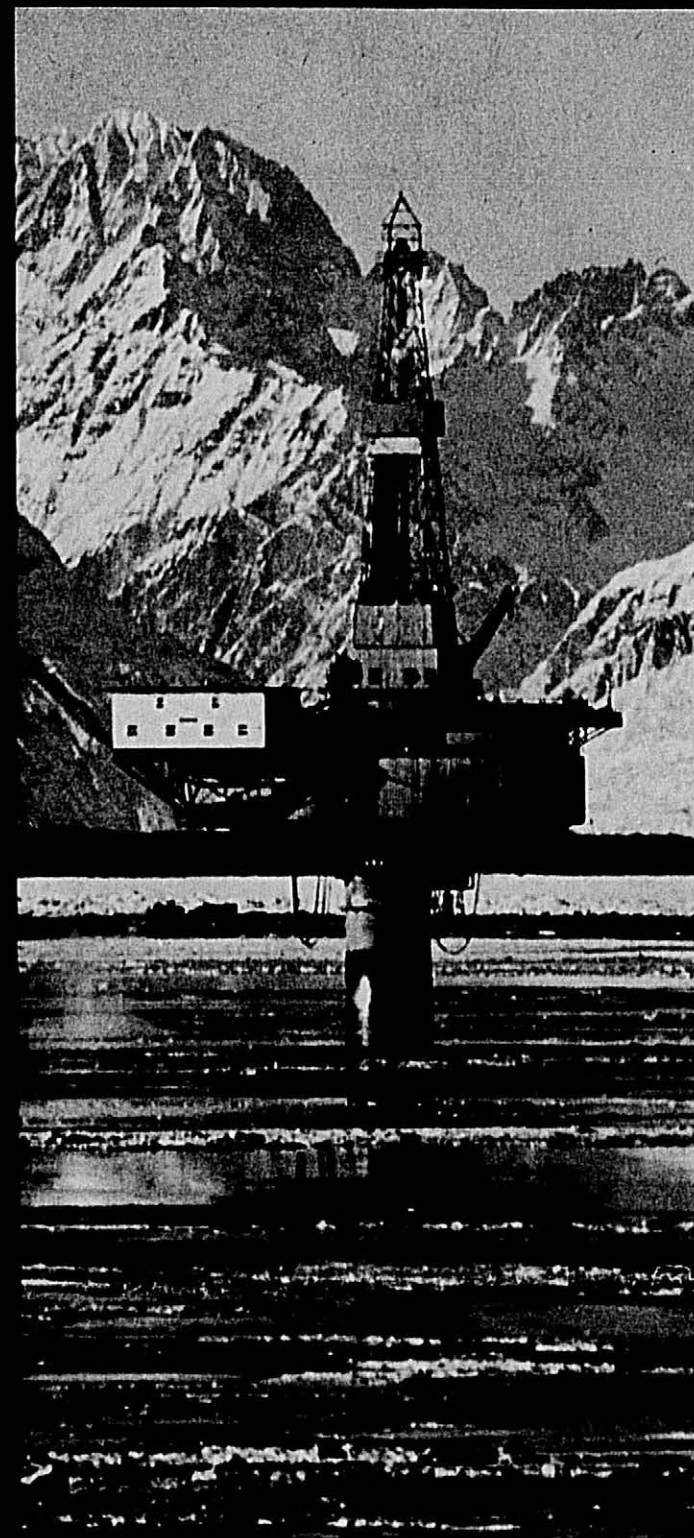
But shipping oil through the Bering Straits, where Russia and the USA are so close, would create the possibility of a new Suez. To avoid this, and also to provide work to Alaskans, a pipeline is being constructed across to a Southern Alaskan port on the other side of the Bering Straits.

The Rand Corporation and the United States Navy have already started to run simulations of future events expected to be precipitated by the oil finds.

### SUGGEST NORTH POLE BE MELTED

The Rand Corporation has been running some other simulations as well.

The "Trading Bay" is the most unique offshore drilling platform ever constructed. Its monopod design sets it apart from all other stationary drilling rigs which have three or four legs.



MANHATTAN OIL COMPANY & UNION PACIFIC

### SUBMARINE TANKERS CONSIDERED

Other than shipping oil through the Arctic Sea, many novel ideas are being examined. The Arctic Institute of North America, an organization affiliated with McGill University, last month organized a landmark conference on the transportation problems of the Arctic.

The relative merits of railway, air-freight, pipeline, hovercraft, Mackenzie river shipping, and submarine tankers were considered.

Many land routes, including pipeline, share the problem of muskeg. Muskeg is frozen in winter and easy to work on, but in summer it becomes swampy and can not support conventional vehicles or structures required for a pipeline.

Sea surface routes share the problem of ice. Submarines hauling huge sausages of oil, or pipelines under the water, are undergoing feasibility study, and it is expected that a novel approach to the transportation of oil will be discovered.

One promising possibility is the construction of mammoth oil tankers of 500,000 dwt. These ships, many times larger than any now in use, would use their tremendous bulk to just break through ice floes as if they were foam on the water.

### ESKIMO IS FORGOTTEN MAN

Throughout this activity the native population will undoubtedly suffer. Social scientists fear that indigenous Eskimo culture will disappear rapidly under the impact of the white man's economic development of the North.

Canada's record of Eskimo administration is characterized by mismanagement. After Christianizing, alcoholizing, forcing the Eskimo to submit to alien legal structures, and finally initiating the mass production of soapstone trinkets, remnants of Eskimo culture will soon be eliminated.

The Eskimo will become unskilled labor parasites of the oil industry to be left stranded and untrained when oil reserves run dry.



## ONE OF THE RAREST NORTH AMERICAN MAMMALS

By Austin W. Cameron

Many species of animals are so abundant that they can be counted in the millions of individuals, whereas others are so scarce that the total world population does not exceed a few hundred. To the latter category belongs a marine mammal known to biologists as the Gray Seal (*Halichoerus grypus*) and to fishermen as the Horsehead. Restricted to the southern half of the Gulf of St. Lawrence and the Atlantic coast of Nova Scotia during the breeding season, it is among the rarest of North American mammals with a total population of less than 6,000 individuals. It has a European counterpart, also known as the Gray Seal, but it is by no means certain that the two are one and the same species and even the latter must be considered uncommon by most standards.

I became interested in this seal because it occurs in areas where I had already established a research project under the sponsorship of the Redpath Museum concerned with isolated populations of small mammals occurring on coastal islands in Nova Scotia. Two of these islands, known as the Basque Islands, are also occupied by the Gray Seals in the breeding season and it was relatively simple to carry on both projects simultaneously. Since my small mammal study would require at least five years to complete, I decided to include a long-range study of the seals as well.

The project proved to be one of the most fascinating I have ever undertaken, perhaps because I was aware that I was the first biologist ever to observe the behaviour of this large mammal in its natural environment. Most large mammals live in areas

where continuous observations are difficult, if not impossible, and since most of them are nocturnal, the prospects of securing anything but a fragmentary picture of their normal behaviour is rather remote. The Gray Seals, on the other hand, carried on many of their activities during the daylight hours and the barren islets on which they breed provide an open arena where their various activities can be readily observed provided one is not adverse to doing field work in mid-winter.

There are a number of good reasons why virtually nothing was known about the breeding behaviour of these mammals prior to my study. First of all, there are very few of them and they invariably breed on remote islands far removed from civilization. In fact, prior to 1950, there were those biolo-

### Gray Seal once considered extinct

gists who believed that the Western Atlantic Gray Seal was extinct. To add to the difficulties, as mentioned above, is the fact that they breed in mid-winter when low temperatures, biting winds and freezing spray often make observations difficult to say nothing of the discomfort the observer is obliged to endure. Thirdly, there are relatively few field biologists and most of these are committed to studies of animals of considerable economic importance rather than to the rarer species which are at best only locally important, if at all.

The Gray Seal is one of the larger members of the Hair Seal family, the adult bulls exceeding eight feet in total length and the females six and one-

half feet. The bulls are of a uniform dark gray color, usually, while the cows vary from dark gray to pale fawn. The new-born pups are pure white. The nose of the Gray Seal is long and arched hence the common name "Horsehead" applied to them by the fisherman.

In the Western Atlantic, only four breeding colonies are known, disregarding those females which bear their young on ice floes. Two of these, Deadman's Island in the Magdalen Islands Archipelago and Amet Island on the North shore of peninsular Nova Scotia are very small in terms of the number of young born. These colonies have progressively declined in numbers in the last decade. The other two colonies, Sable Island, lying 200 miles southeast of Nova Scotia, and the Basque Islands, off the southern tip of Cape Breton Island, produce most of the pups. Others breed on the ice floes in the extreme southeastern part of the Gulf of St. Lawrence and it is suspected that many of these originally bred on Deadman and Amet Islands. During the non-breeding season these seals wander north as far as Labrador and south to Massachusetts. The total population, estimated to be about 5,600, is based on aerial counts.

As mentioned before, populations of Gray Seals also occur in the eastern Atlantic near the British Isles, the west and south coasts of Scandinavia and north to Iceland. It is by no means certain, however, that these seals and their Western Atlantic counterparts represent the same species. The two populations are separated by a distance of 1500 miles and are believed to have been separated for a period of

at least 100,000 years. We do know they differ in that the European seals (except in the Baltic) breed in the autumn whereas ours bear their young in mid-winter. Until museums can bring together enough specimens for comparative purposes, we shall be unable to come to any conclusion on this point. The North American Gray Seals are, therefore, usually referred to as "Western Atlantic Gray Seals".

It was on the Basque Islands, as previously mentioned, that my studies were begun in February of 1966. I had, of course, made short-term studies prior to this, such as on the Razades Islands near Trois Pistoles, P.Q., in 1951, on the north coast of Anticosti Island in 1952, on the Magdalen Islands in 1959 and on the St. Pierre and Miquelon Archipelago in 1963 and 1964. The 1966 study, however, was the first winter field project exclusively devoted to seals.

I began my field studies by establishing myself in a small shack on a cliff overlooking the Basque Islands where I carried out more or less continuous observations during the first two weeks of February. From this vantage point I could observe the seals at a distance of about 1000 yards making use of telescopes and binoculars. It was important that I not land on the islands themselves as this would have disrupted the colony and, of course, altered the behaviour of the seals.

By early February all the pups had been born and the first stages of mating behaviour were commencing. I was therefore able to obtain information on only part of the breeding cycle and I returned again in mid-January in 1967 and in December, 1967 and early January, 1968 to obtain a more

complete picture. Studies from mid-February onwards are yet to be undertaken. The following account of behaviour in the colony is, therefore, a composite of several seasons of observations, rather than the result of a single study covering the complete breeding cycle which extends over a period of about three months.

It was found that the bulls and pregnant cows congregate on exposed reefs in the vicinity of the breeding islands in late December and early January. In mid-January they beach on the islands themselves and once the invasion has begun almost the entire herd haul out simultaneously. The large bulls take up positions at scattered points throughout the island

### cows ready to mate two weeks after giving birth

where most will remain for a month or more. The pregnant females, on the other hand, are almost constantly on the move, bickering with one another and with the bulls, who, however, usually ignore them. When a cow bears her pup, however, she remains in that particular spot and apparently becomes a part of the harem of the bull in whose territory she happens to be. The cow will remain constantly with her pup for the first week, probably to protect him from the roving females who might crush him to death if he should be in their path. After all the cows have borne their young, relative peace descends on the colony because each bull has established a harem and each cow has a small bit of territory where she and her pup will spend most of their time until the cow deserts the pup and returns to the sea.

When the pup is about a week old, the female will go to sea twice daily, perhaps to feed. The time of departure and arrival will vary each day as there movements are determined by the tides. Most cows leave the beaches as the tide is falling and return when it is rising. Shortly after her return to the island, she will join her pup and nursing begins almost immediately. There after, the two will sleep for several hours, although a cow may spend some time playing with her pup. One in particular spent much of this leisure time taking her pup down to water's edge to play at the edge of the surf, although the pup would not enter the water even when the cow appeared to be enticing him to do so.

About two weeks after the birth of her pup, the cow is ready to mate. Up until this time the bulls are inactive and spend most of their time sleeping. As the mating time approaches, however, they become more alert and begin to take a greater interest in the activities within the colony. Each bull keeps a watch on his harem and sometimes descends to the water's edge to meet the incoming cows. The degree to which a bull supervises his cows varies from bull to bull. One bull in particular, whom I kept under close observation, was almost constantly alert, watching over every cow who changed positions within his territory and, on one occasion, he pursued a cow who attempted to cross over into the territory of a neighboring bull. When she became aware that the overlord was following her, she changed direction and plunged into the sea.

While no fighting between resident bulls was observed, younger bulls frequently came into conflict with the overlords. From time to time a younger bull would suddenly draw out of the sea and enter a harem where he would visit one or more of the cows. If the resident bull should be absent he took advantage of the situation and centered his attention on one or more of the cows. Sometimes the cows accepted the strange bull, at other times they repulsed him. When the overlord became aware of the intruder, he immediately galloped in his direction whereupon the younger bull usually fled in the opposite direction and plunged into the sea. On two occasions, however, the bachelor stood his ground and the two engaged in physi-

cal combat. When they were within striking range, one or both made a sudden leap and seized the other in the neck region. These encounters seemed fierce enough, but no serious injuries were observed. Although no bachelor bull succeeded in taking over a territory and harem of a resident male during the periods I made my observations, such transfers must take place from time to time. As a bull gets older and weaker his prowess consequently declines and it is inevitable that a younger and more vigorous bull will eventually replace him as master of the harem.

Coition was observed only once in the colony, and this occurred in shallow water although it probably takes place on the land in the case of those bulls and cows whose territory lies some distance from the sea.

Embryonic development in this and other seals is unusual in that the fertilized ovum develops to the blastula stage, then remains dormant for several months before resuming development. Thus the gestation period of 11½ months is much longer than is actually required for pre-natal growth.

Information on subsequent movements of the seals is very scanty. The adults leave the colony, so far as we know, about a month after the pups are born, and disperse to largely unknown destinations. The pups remain on the islands, molt their white coats and acquire a pale grey one. They then go to sea and likewise disperse in all directions sometimes hundreds of miles from the breeding colony.

By early May, when my observations are usually resumed, herds of 200 or more can be seen congregated on the beaches of the breeding islands, but by early July they have dispersed up and down the coast. What happens between February and May is unknown because I have been unable to carry out field studies during the period.

Studies, such as this one, of wild animals in their natural environment, are an important part of present-day research in animal behaviour. For many years studies were carried out in laboratories and zoos where, because of the artificial environment, the observed behaviour was often abnormal which in turn led to erroneous conclusions. Laboratory studies are still important in many instances, but observations of the animal under natural conditions must be carried out if we are to arrive at a true picture of typical behaviour.

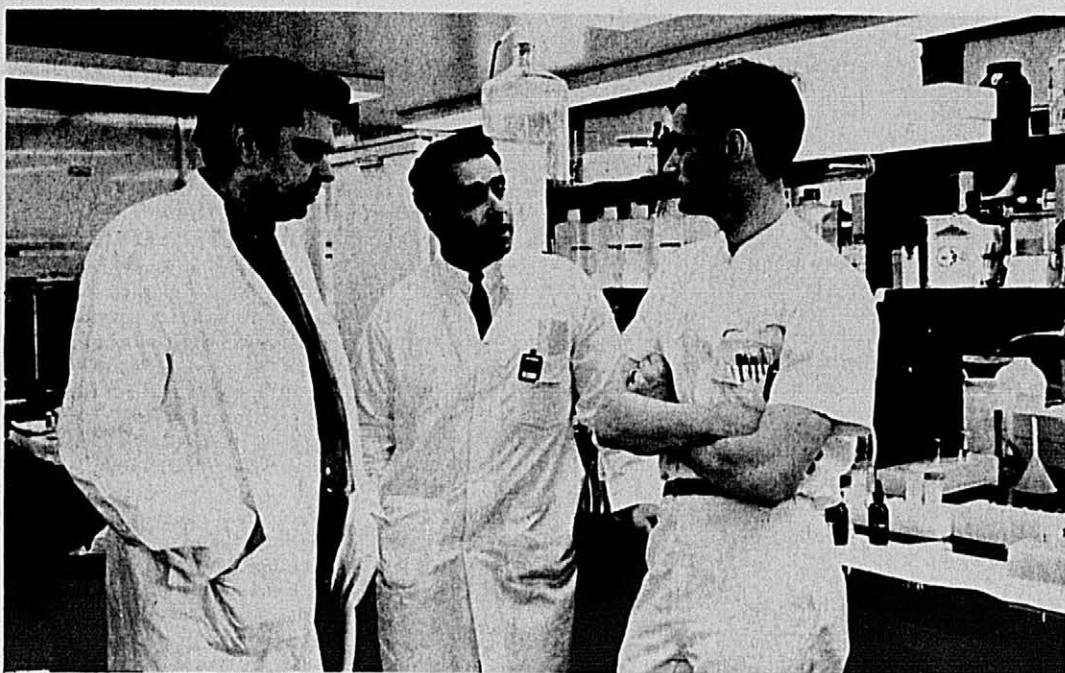
The Gray Seal study also has practical applications in terms of conserva-

### vigilance essential if Gray Seal is to survive

tion. This species is now protected by law in Canada because of its relative scarcity and killing of the pups on the breeding islands is possible only if a special permit is obtained. But those females which have recently begun breeding on the ice floes enjoy no such protection because they are mingling with the breeding Harp Seals which form the basis of the seal fishery. The pups of the two species are very similar and there is every likelihood that the Gray Seal pups will be killed as frequently as those of the Harp Seal. Considering that the entire Gray Seal population is less than 6,000 it is obvious that the killing each year of the estimated 800 pups which are born on ice floes could rapidly decimate the Western Atlantic population. Continuous vigilance by biologists and others interested in conservation, therefore, is essential if these animals are to be preserved for posterity. For that reason, I expect I shall be spending as much time as can be spared each winter near the breeding islands or on the ice floes, observing and studying a mammal that future studies might prove is exclusively Canadian and perhaps in danger of extinction.

Dr. Cameron is Curator of Vertebrate Zoology in the Redpath Museum.

**cancer** continued from page 1



Drs. John Krupay, Phil Gold, and David Thomson, of the cancer research project at the McGill Medical Clinic.

a de-repression of CEA synthesis in this cell and its progeny.

The McGill study parallels work done in Paris and Moscow on hepatoma, (cancer of the liver) which is, however, rare compared to bowel adenocarcinoma in Europe and North America. Other groups working on gastric cancer have found substances analogous to CEA but not displaying the same degree of specificity for tumour tissue. So far, the clear cut results obtained by the McGill group put them in the forefront in this field.

In the last two or three years, Dr. Gold and his coworkers have taken advantage of a discovery which they published in 1967, that an adenocarcinoma releases CEA into the bloodstream. This suggested to the McGill team the possibility of using a test for this antigen in blood serum as a test for bowel cancer. They set out to develop such a test and made use of technique called "coprecipitation inhibition". CEA extracted from tumours is injected into goats, and periodic bleedings of the animals result in quantities of antibody-

containing serum. A standardized preparation of antibody is made as well as a CEA solution, the CEA being "hot" (i.e. labelled, this time with a radioactive element). When the standardized antibody and standardized CEA preparation are mixed, the antibody and antigen (CEA) combine. By adding ammonium sulphate to the solution, the antibody-antigen complex is precipitated to the bottom of the test tube, and the amount of radioactivity in the precipitate is a fixed quantity and quite reproducible. If, on the other hand, serum from an adenocarcinoma patient is first mixed with the labelled CEA preparation, the unlabelled CEA antigen in the serum will reduce the proportion of labelled CEA in the solution. When the CEA is added to the antibody, the unlabelled CEA will compete with the labelled CEA for antibody molecules to combine with and the amount of radioactivity which will be precipitated will be lower. This test is very sensitive and can be performed by a trained technician. In applying the test to 150

patients, only thirty of whom had adenocarcinomas, the results correctly identified these thirty and none others.

One important question remains to be answered before the test can be considered an unqualified success. If the test is administered to a large sample of apparently normal people, will it pick out the few who have an unsuspected adenocarcinoma? The Medical Clinic team are considering various possibilities for setting up a survey or screening to settle this question. This would be an especially valuable project because of the incidence of bowel cancer, which exceeds that of almost all other types of tumour. In the meantime, Dr. Gold's telephone is continually ringing with enquiries both from individuals wishing to have the test carried out on them, and from institutions here and in the United States expressing interest in larger scale projects.



# talking to a great film artist

NORMAN McLAREN INTERVIEWED  
by DON McWILLIAMS

"... there I was, looking, when suddenly there came this meat-cleaver of a film effect. It split me clean down to the middle of my spine. One side fell to the right and the other to the left—then, wham, I slapped together again..."

These words belong to Len Lye, the artist, who was, because of his art on film, an early influence on Norman McLaren; and they sum up rather tidily my feelings upon seeing my first McLaren, the cameraless film "SERENAL" in 1959. From that time on, I was always on the look-out for a McLaren short when I went to the movies. But, outside of film societies, I saw few and far between. It wasn't till two years ago, when I began snooping around N.F.B. offices, that I was able to indulge myself. It was only natural for me to begin to seek a greater understanding of his work and his goals. An acquaintance with his technique brought about by my pupils making films à la McLaren only served to increase my curiosity.

**REPORTER:** You once said, "Almost all of my films start with curiosity about some technique." What was the curiosity you had back in 1933?

**NORMAN McLAREN:** It was a very elementary curiosity about film itself, just the very excitement of touching film which every amateur who is really serious about film-making must experience. Just even seeing material that you shot, on the screen, re-seeing it, is excitement. But I saw film as a means of manipulating motion.

I was at that time a student in the Glasgow School of Art, studying drawing and painting. I found painting and drawing not satisfying because they didn't have motion and movement in them. I was eager to find some way to use motion, and this seemed the most obvious way, to use film. One of my first tests in film was actually without camera—just painting on film, then projecting it and seeing what kind of a motion resulted. I found, in the School of Art, an old 35 mm portable projector, which had one disadvantage in that it chewed up the film, so that after you had screened it about three times, it was impossible to screen it any more...

From about the age of 9 or 10 on I went to movies regularly. But I took no serious interest in them until about the age of 16 or 17, when I saw my first Russian movies, Pudovkin and Eisenstein, and that suddenly excited me about movies as a medium.

**REPORTER:** It was live cinema then?

**NORMAN McLAREN:** Yes, well, that was one strand of my interest. Quite apart from that was my interest as a painter in what made paintings move.

**REPORTER:** Had you been seeing animated films?

**NORMAN McLAREN:** Yes. I remember my earliest films were "Felix the Cat," and then "Mickey Mouse," and then Disney "Silly Symphonies," the first half dozen of them, which impressed me very much.

**REPORTER:** Did you relate those to what you were trying to do?

**NORMAN McLAREN:** No, I didn't... I wanted to do mobile abstractions.

It was a revelation to McLaren when he saw Len Lye's "Color Box" and realised that not only was someone else using the same technique as he, but was doing it better. This stimulated and encouraged him. But to what?

**NORMAN McLAREN:** I had started dreaming of pictures that sort of have movements in them, moving forms and so on. I listened to music a lot of the time,

and forms suggested themselves in motion to me, just naturally, while listening to the music. Then I saw a film which made a big impact on me—this was about a year after I had started in film. It was by Oscar Fischinger, an early German film-maker, who made a whole series of abstract films to music, mostly 19th century semi-classical music. This particular film I saw was to Brahms' Hungarian Dance No. 6, I think, and it was entirely abstract, but very fluid abstraction... It was very fluid forms—the music is quite fast and this was for me like the realization of a dream. I dreamt of forms, and here was someone else dreaming of different forms to music, but he actually had turned it into a movie. I was greatly influenced by that film.

**REPORTER:** I guess this was just pure movement, then, whereas what you had done was actually recognizable shapes?

**NORMAN McLAREN:** When I had been using recognizable shapes—well you have to use some kind of shapes, but—the shape is so fluid and changes its form in a matter of about four or five frames: it goes from here to there and changes and then disappears. It reappears in different forms and changes its shape in half a second or less. So, in other words, the emphasis was on the motion, not on the thing that moved, which struck me as being the most essential thing in an abstract film.

*Norman McLaren has come a long way since these early days of discovery. He has found fame, won innumerable awards, and shown himself as a leader amongst film-makers, or, rather, amongst movie-makers.*

**NORMAN McLAREN:** I think the term "movies" is such a much more wonderful term than the term "film." Because movies mean that they move. That's the essential quality...

*Yet he is still filled with a restlessness that pushes him on, despite ill health, in his attempt to understand motion.*

**NORMAN McLAREN:** And I found by just simple exercises of drawing on film, for instance, where I would have a triangle move and do something—move across and touch a square, and react, and pull away quickly, and the square would react to that action. Now, I find it that it couldn't have made any difference if, instead of the triangle I had put the shape of a heart, or instead of the square, a circle. And if they had gone through the same path of action, the path of reaction, that's the thing that would have come across—what was going on... How it moves is more important than what moves. Though what moves is important, but in relative order of importance, it's how it moves that's the important thing.

*McLaren does his exploring at the National Film Board in Montreal. He came to Canada in 1941 at the request of John Grierson, first head of the N.F.B., and under whom McLaren had worked at the film unit of the British Post Office. At that time McLaren was in New York where he had gone in late '39 as a freelance film-maker.*

*As can be seen from the illustrations, McLaren explores via many techniques. This seemingly inconsistent line that his work follows has led some to suggest that he is just an experimenter, albeit a great one, but nothing more. J. B. Priestly once wrote that a productive artist needs talent and genius. The genius provides the ideas and the talent disciplines and moulds them. He who has only genius will produce sprawling unsatisfying works despite their flashes of insight. He who has only talent becomes a mere experimenter. McLaren bristles at the suggestion that he is just an experimenter.*

**NORMAN McLAREN:** Well, I think the difference between an experimenter and an artist is this: that an experimenter will get interested in a technique, shoot a lot of material using the technique, and assemble it roughly, in some kind of rough order, but—and it may be quite interesting to look at, or bits of it will be interesting to look at—but for an artist, shooting the material is just the first stage. He has to, if he's a proper artist, has to weld it into a unity, with a beginning and a middle and an end, so that it is a complete experience with consistency and the right amount of variety in it too. While, for instance, an experimenter's work may be full of inconsistency. A little example of this, a little example of that—a mixture of things, all very interesting, just like looking at rushes... What distinguishes a film as a work of art is that source of unity and single aim and purpose and mood; and everything that's done that happens is designed to further that particular point of view. I must say that maybe I am just an experimenter. But I try not to be... I think it is much more important and much more difficult to be an artist.

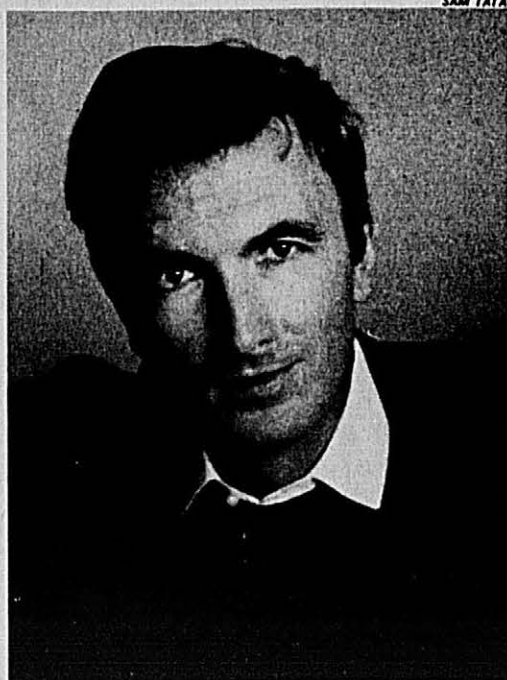
*This marriage of talent and genius is a characteristic of McLaren, and I find it refreshing in these days when the 'progressives' would define art as doing your own thing with no criteria other than the market value and the fact that the 'art' is sufficiently way-out.*

**NORMAN McLAREN:** I set limitations. Technical limitations and artistic limitations too. Oh yes, because I think most works of art depend upon a set of technical limitations. Many works of art get much of the spriteness and liveliness from a set of limitations. But I don't search for the most difficult. It's easier to work within a set of strict limitations than not. For instance, it's easier to do a woodcut than to do an oil painting. But I don't want to make things difficult for myself, once I've set up the initial limitations. I try to find the easy way. If I come to a point in the film where I've got the alternative of three ways of doing a certain thing and all equally good, I'll choose the easiest one.

*All his techniques, whilst on the surface dissimilar, have a basic concern with motion. In the cameraless films ("Begone Dull Care," "Blinkety Blank" etc.) this is readily apparent as form and color flash across the screen. In the pastel films ("Phantasy," "La Poullette Grise"), it is motion as growth. He begins with an 18" x 24" piece of cardboard and proceeds to create a continually evolving picture, filming it as he goes.*

**NORMAN McLAREN:** When I see a painting on the wall, I don't think of all the stages that led up to that. No, it's a complete work in itself, but in my own experience of doing paintings, I've been very conscious of

continued next page



Norman McLaren



Two and the heights, we started to work on the film. We began to explore their properties. Smoothing the paper, using them as the screen, and so on. We start creating the film. Discussion leads to experiment, and experiment to film. These relationships determine the point where they meet, and then they go on to make the film, not themselves.



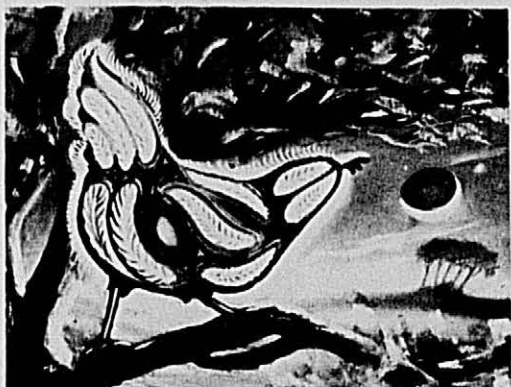
Working on film. The film is being used as a screen, and the paper is being used as a screen.



Two and the heights, we started to work on the film. We began to explore their properties. Smoothing the paper, using them as the screen, and so on. We start creating the film. Discussion leads to experiment, and experiment to film. These relationships determine the point where they meet, and then they go on to make the film, not themselves.

Hand engraving the sound track of "Rhythmic". Various knives, styluses and needle-points are used to engrave sound track area of 35mm film. The black emulsion is scraped away in small strokes of varying size and shape. These strokes will create percussive sound effects when the film is projected.

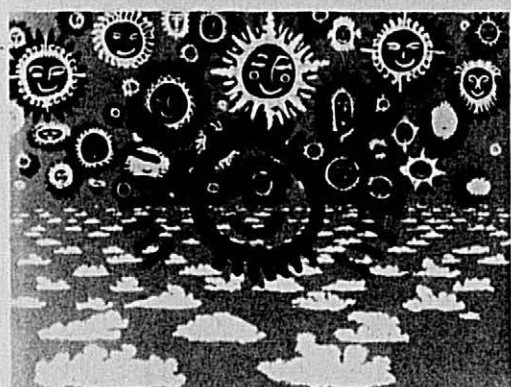




Scene from the National Film Board animation film "Poulette Grise," a French-Canadian folk song.



"Blinkety Blank": An animated film engraved directly on 35mm celluloid with pen-knife, sewing needle and razor blade, and colored by hand with sable-hair brush and transparent cellulose dyes.



Still from "Now is the time." The left eye image of a stereoscopic film made in 1951 for the Festival of Britain. Animation drawn directly on 35mm film, and superimposed on backgrounds.

the fact that they slowly evolve. That process seemed to me to be more important than the final result. When I do a painting—I'm not a good painter at all, I don't know when to stop. The whole thing is a process of chopping and changing around. I am more fascinated by the chopping and changing around than the final thing. This naturally led to trying to channel this into film-making.

*Pixillation* ("Neighbours," "Chairy Tale") explores motion in yet another way. By using such techniques as single-frame stop motion, by shooting at different speeds—for example, at 4 frames a second rather than the usual 24—he can create new rules for the order of motion, and, perhaps more interestingly, he can give humans and objects the freedom of animation drawings. The bonds of natural laws and time can be broken.

With his stereoscopic films ("Around is Around," "Now is the Time"), McLaren goes one step further—not only do his film-paintings have those dimensions of duration and movement which are missing from static art, but they can now move through space, which McLaren finds strongly kinetic. Lack of public interest in 3-D, and consequently cinemas to show it, has made it impossible for him to explore this aspect of motion any more since his initial stereoscopic films of 1951 which were made for the 'Festival of Britain.'

One technique that Norman McLaren picked up from early Russian and German experimenters and which he developed to a very fine art is that of synthetic sound. The inspiration to do this arose from economic grounds as much as from technical curiosity. It saved the expense of specially written music and live musicians, and it is relatively easy to synchronise to visuals. In this last respect, it has proved very useful; as, for example, the way it was employed in "Phantasy," a pastel film.

**REPORTER:** So when you did "Phantasy," you decided that you wanted to see if you could blend synthetic and live music?

**NORMAN McLAREN:** Well, I made the picture first, and then I showed it to Maurice Blackburn, and asked him if he'd be interested in composing the music for it. So it was left to him to make the decision. But the decision came about from some practical considerations. For instance within "Phantasy" there are lot of little accented points. To synchronise these perfectly is quite a job, in terms of live performance, and it is a very simple job to synchronise things precisely with synthetic sound.

A film that I'm working on now is just in the beginning stage, so I don't know how it's going to turn out, but I'm using synthetic sound . . . and that very sound track that I create will provide the materials for the picture. In other words what you'll be seeing on the picture is a number of sound tracks.

**Music is a most important element in a McLaren film and he agrees that many of his films could be called "visualised music." Music certainly suggests movement to McLaren. And shapes, but usually only momentary ones. What of color?**

**NORMAN McLAREN:** Yes, it does. I have no precise theory about this, but I know if there are sections of the music which are very low in pitch, I will tend to use dark colors, deep reds, deep blues, dark greens. If there's high pitched music, I'll use light colors, yellows, lemons, whites, very pale blues, things like that. In "Begone Dull Care," I was conscious of manipulating colors this way, but you can't evolve a theory

about it, you can't push it too far, or you end up in impossibilities.

From time to time, he has made films that are illustrations of songs. One example is "Le Merle," which is also an example of another McLaren technique. This is a film in which simple cut-outs move against a plain background and illustrate the song. He has not made any song-illustrating films for several years as he finds it a "very difficult business." It was the problem of words and rhythm.

**NORMAN McLAREN:** It was difficult to make these pictures, keeping in mind both these elements, because the rhythmic thing would be doing one thing and words would be doing another thing. To do a third thing, the picture, which integrated with the first two things, was very difficult.

The fact that retrospectives are very common suggests that we believe in the evolutionary growth, and possibly the unity of an artist's work. In McLaren the first is apparent. As the years pass, his probings into motion become more and more profound, although not necessarily technically more difficult. For example, in the 1954 film, "Blinkety Blank," images were not put on each frame. Yet this seemingly simple idea opened the door to consideration of the after-image, the after-image being what remains on the retina although no image remains on the film. We can see this evolution in his work in his changing attitude to color. Color in the McLaren films has become more subdued, subtle as the years have passed, and he has become more interested in the contrast of moving light on dark backgrounds. Nowhere in his work is this more brilliantly explored than in "Pas de Deux" (1968), where the myriad patterns of light become a rare food for the viewer's imagination. Unity is not so apparent in McLaren's work, although for me the continual concern with motion and the pulling together in a certain film of disparate elements from other films gives a unity. McLaren does not see any unity in his work, however.

**NORMAN McLAREN:** I don't want there to be any unity. I don't see what the point is. Unless you are organizing a screening of my works—I think it is always a very bad idea when people have a retrospective to show all my work together—it was never designed to be seen that way. It was designed to be small films accompanying larger feature films.

The last sentence illustrates well the modesty with which McLaren regards his own work. Often though, I've found greater interest and enjoyment in the McLaren short than in the feature it 'accompanies.'

Like many artists and unlike the critics, Norman McLaren tends to avoid intellectualising about his work, since this might inhibit the process of improvisation that is an essential element in all his films. But he does attempt to recognise influences from his own experiences and to control them if they appear to be introducing audience-manipulating symbols. For example, in 1952, McLaren journeyed to India at the request of UNESCO and spent a year there giving instruction in the making of audio-visual materials for use in health education. Since that visit one can perceive a marked change in the structure of most of his films, namely, to begin with a simple theme and to develop it in increasing complexity and tempo, exactly in the manner of Indian classical music. But this was not a deliberate change in direction.

**NORMAN McLAREN:** I found myself creating that kind of structure without consciously being aware. It was only after I had done it a number of times that I realized that actually the same structures were behind the usual piece of Indian classical music. I found it very satisfying. But it wasn't a conscious attempt to take something Indian and do the same thing.

This was not McLaren's first experience of another culture. Prior to 1952, he had also spent a year in China on a similar mission. One could point to the delicacy of his drawings in films such as "Blinkety Blank" and "Serenal" as at least being partly the result of this period and his subsequent intense interest in Chinese culture. McLaren, however, takes great pains to control the role of the subconscious, by, for example, carefully vetting the shapes he draws since they might have pointed symbolic meanings for his audience. This determination to reduce his films to designed movements rather than moving designs helps give his films their universal appeal which transcends cultural barriers with an ease the feature film-maker might well envy.

**NORMAN McLAREN:** There's a big sort of common heritage, common language when you come to movement.

McLaren films generally then contain no content other than that which the viewer wishes to give to them. I say generally for there are one or two exceptions. One exception is "Neighbours" in which the mounting violence of two men who each wish to possess a simple flower ends in their death and message "Love Your Neighbour." But McLaren had long been anti-war. At the Glasgow School of Art he made an anti-war film and later went to Spain as a cameraman for "The Defence of Madrid."

**NORMAN McLAREN:** As soon as it was shot, we brought it back to England and edited it and then showed it around in special screenings where we collected funds for international aid.

His experience 10 years later in China at the tail-end of the civil war produced the tension that gave birth to "Neighbours" which, as well as being a statement, still remained an exploration of movement through the technique of Pixillation. Another film in which viewers often find content, content which usually has some connection with the story of the world or the creation of the Bible, is the film "Phantasy."

**NORMAN McLAREN:** There wasn't a conscious content, but a subconscious. This was a period when I was interested in surrealism, the believing you should let your subconscious control what you do as much as possible. In making that film, I just went ahead and improvised all the way. Some of the things, images and movements that turned out sort of surprised me, I didn't know what they meant in terms of the pictures as a whole, or in terms of their absolute meaning. So I can't interpret it. It's subconscious. It's quite possible for people to take many different meanings. I think that's the value of surrealist art . . . It's rich with subconscious connotations and associations . . .

Despite McLaren's assertion that his films illustrate various curiosities about technique, mere technique cannot explain the appeal of his films. As he emphasized, he is an artist and his films can appeal on all levels—esthetic, or sensual or intellectual. McLaren's latest film "Pas De Deux" is an extraordinary success on all these levels. His chef d'oeuvre grew out of some experiments that he tried with fellow animator Grant Munro.

**NORMAN McLAREN:** About six years before I made "Pas de Deux," Grant Munro and myself made a number of experiments with ourselves in front of the camera, actually running and playing leap-frog, and doing various simple actions. We multiplied them, and got very interesting results. So I got excited about the technique, in just the multiplied image. I realized I could do a whole series of tests; if I were an experimenter, I could have done a wonderful series of motion tests. But I waited until I had a definite idea, because I just didn't want to use the multiplied image idea on any old thing. It had to be something appropriate, and I had to wait 3 or 4 years until that appeared in mind, the idea of the ballet. It was to be after our preliminary tests, it had to be either something gymnastic or sports or dance or ballet. I thought if it was sports or gymnastics it might be difficult to build up a unity and development of the thing. It would be a series of interesting things linked together, and it would have been impossible, perhaps to link, to get a series that would really build into more and more spectacular images. But I felt, for me, it was more exciting to try to do as classical ballet.

The film opens with a single female dancer whose image splits into two. The girl dances with herself. A boy joins them. The girl's two images merge. Then begins the pas de deux in earnest. McLaren commences to multiply the images so that each movement leaves traces of itself. The multiplications are carried to a maximum of eleven. The multiple shimmering intermingle in patterns of such extraordinary beauty that "Pas de Deux" becomes one of those films that one can't talk about. It is the 'complete experience' in which McLaren seeks to involve his audience. For McLaren does not adopt any attitudes of superiority or disregard vis-a-vis his audience.

**NORMAN McLAREN:** I always have the audience in the back of my mind. Very often an ill-defined audience. (Sometimes) as a more clearly defined audience. When making "Rythmetic" I thought about children and hoped it would help children be interested in numbers. But even in any film, no matter how abstract it is, or concrete, I have an audience in mind. I think, I keep thinking, of a group of people watching that film and I keep looking out for the possibility of them getting bored. I think this is the task of the filmmaker—you're given this amount of time, and you've got a captured audience and you must keep them interested throughout that whole space of time and not let their interest flag. I'm terrified of letting an audience get bored.

McLaren is unconcerned, however, about his lack of fame amongst the general public.

**NORMAN McLAREN:** No, that doesn't worry me at all. I would be worried if I made films, if after a year's distribution, they just sat on the shelf and no one was interested, but they do get to people who are interested in film. Even in an audience of say, fifty people; if you can stimulate five out of that fifty, I think you've accomplished something.

McLaren's remarks concerning audiences are very typical of the man. On meeting him, one is very struck with his simplicity, gentleness and modesty. He is completely unaffected. But one can sense the iron will which gives him that dedication to his work. McLaren drives a Volkswagen and similarly occupies a Volkswagen-sized office behind the sound department of the N.F.B., Montreal. There he works surrounded by his equipment, films and filing cabinets, which spill out from his office into the corridor. It seemed completely in character that reams of 35 mm. film had to be removed from the coat rack so that we could hang our coats. The most striking physical aspect of Norman McLaren is his eyes, deep and intense, indicating a restlessness only to be calmed fully when he is working. He avoids those situations which would interfere with his art, such as the occasional approach from Hollywood. He referred to the two weeks he had spent preparing titles for a Jack Paar special as "a waste of effort," and he laughed, puckishly I thought, as he told of a New York advertising agency's attempt to get him to do a commercial for a well-known soft drink company. He rarely sees films outside the times he serves on festival juries. Jury duty he does relatively rarely since it interferes with his work.

Next door to McLaren is Evelyn Lambart, his partner in many films.

**NORMAN McLAREN:** Sometimes I get the impression from articles people write about me that I make my films almost single-handed. Now, this is a quite erroneous impression. Usually it's with one or two people. We form a small team. Most often it's been with Evelyn Lambart, but almost as frequently with Grant Munro. On the music side it's with Maurice Blackburn. So there's usually three people on the team. But, of course, in a film like "Pas de Deux," I had to work with a larger team—it was a collaborative job with Ludmilla Chiriaeff who contributed a great deal to the film through its choreography.

The original ideas, however, germinate in his mind. The importance of Maurice Blackburn is well illustrated by McLaren's words on the making of "Pas de Deux." They point out well, too, the degree of effort and care involved in a McLaren film. The dancing had been filmed without music, in silence.

**NORMAN McLAREN:** I showed the film to Maurice Blackburn after the visuals were complete to ask his advice on music, because I had already tried several different possibilities, and none of them sounded right. He immediately felt that a particular recording, on a disc he had at home, a Rumanian folk music disc would be right.

This music was solo pan-pipes, with a constantly sustained orchestral chord as background. It was a very short piece, just 2 or 3 minutes long, while our visuals were 14 minutes. He transferred the music several times to film, to have enough material to work

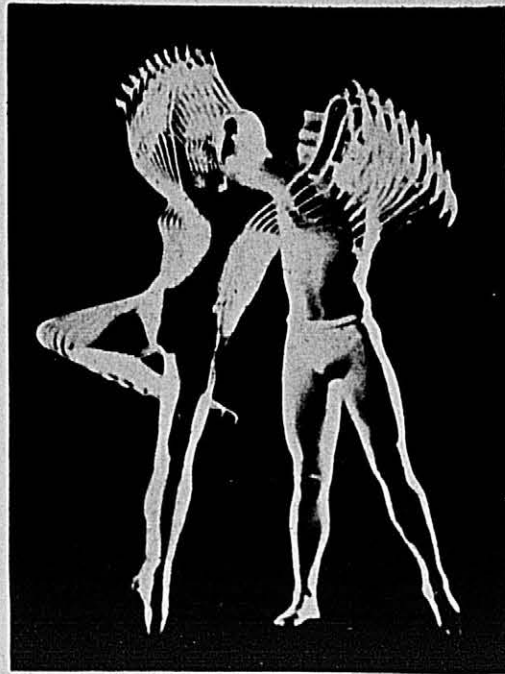
#### THE MULTIPLE IMAGE TECHNIQUE IN PAS DE DEUX

In the original shooting of "Pas de Deux," McLaren used a multiple image technique. The camera was set up to shoot a single image of the dancer, but the image was multiplied by a series of mirrors, creating a series of images that moved in different directions.

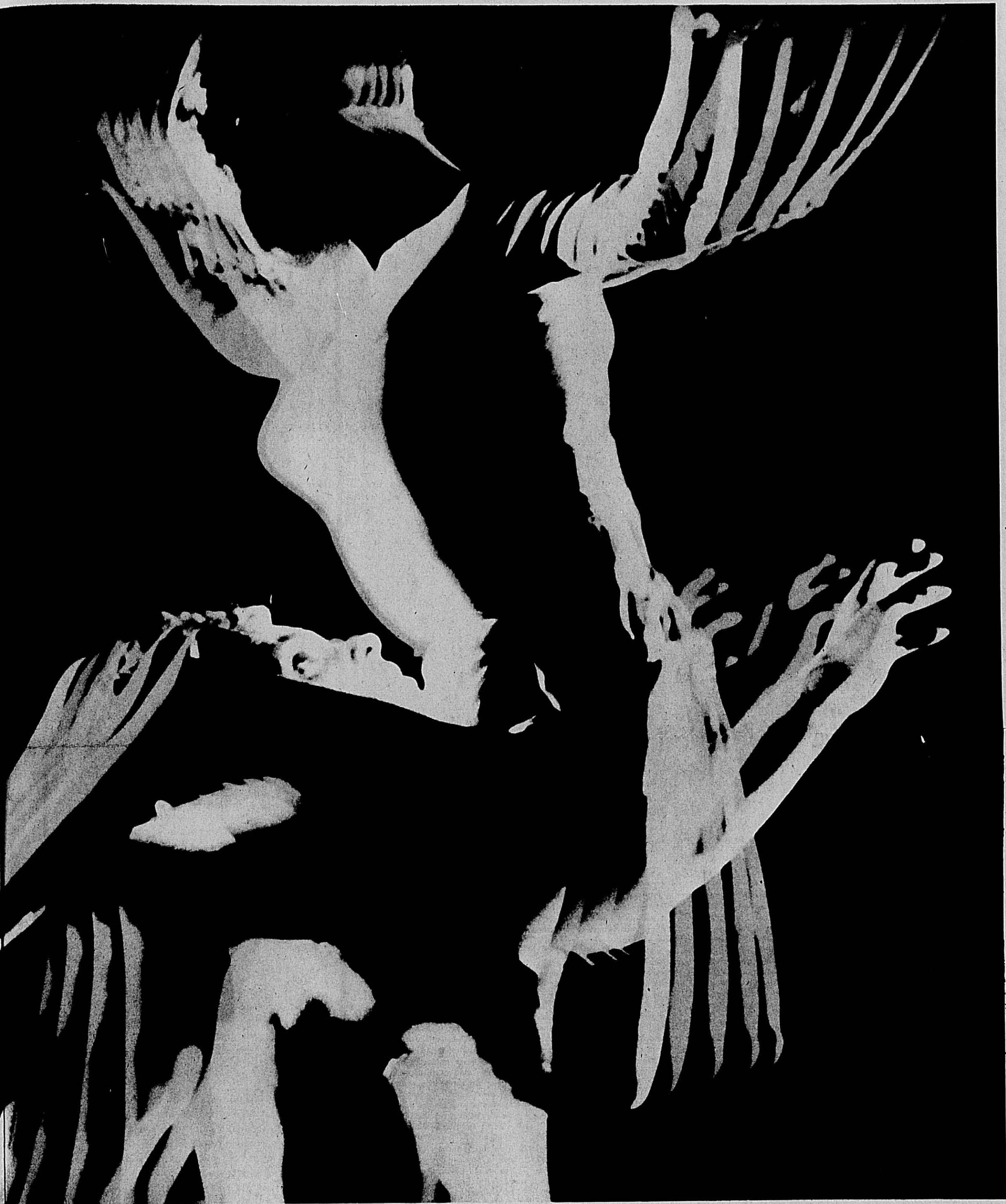
The multiple image technique was used to create a sense of movement and rhythm. The dancer's movements were captured in a series of images that moved in different directions, creating a sense of movement and rhythm.

When the dancer moved, the multiple images moved in different directions, creating a sense of movement and rhythm. The multiple image technique was used to create a sense of movement and rhythm.

The multiple image technique was used to create a sense of movement and rhythm. The multiple image technique was used to create a sense of movement and rhythm. The multiple image technique was used to create a sense of movement and rhythm.







with. In addition, he recorded the same sustained chord on a harp, in different registers and with different acoustical effects. This produced a drone, with a constantly changing shimmering effect. With all this material he then started to edit very carefully in relation to the picture. Using the harp drone throughout as a steady background, he at first introduced occasional fragments of the pan-pipe melody. Little by little these fragments became more frequent, until finally at the end of the film we hear the entire pan-pipes melody.

*Like many artists, McLaren has a dissatisfaction with his achievements. Not all the prizes, nor paeans of praise can compensate. Even "Pas de Deux" does not fully satisfy him. For me, the film is a culmination which pulls together so many strands of his work. He has at last captured the movement between the frames or the actions; and on the screen we see before us the present movement, the movement just gone, the movement yet to come—time was, time is, time will be—all the stages of motion are there caught, frozen, in an instant for our contemplation; yet the essential quality of motion is not lost or diminished. Norman McLaren does not see his work as a culmination though.*

**NORMAN McLAREN:** I don't see that at all. It seems

to me I'm off in a new direction from my other work, and not related at all. But from the outsider's point of view, I can quite see how it would look as though there probably are some connections.

I don't think I've really captured what I've been searching for in "Pas de Deux" at all. Because, I think—well, in my normal films I capture what I'm searching for with just normal movement. But "Pas de Deux" is a very peculiar case of the movement leaving traces of itself . . . This was apparent from preliminary tests of "Pas de Deux" where we photographed a random selection of balletic movements and then went ahead and multiplied them, to see what the result was. Some didn't add up to anything when they had a multiplied image, they just became confusing and not interesting. But others did become interesting, and so just the general principle of showing all the traces, all the phases of the movement isn't going to help things, or help express the movement necessarily.

*And so motion still keeps some secrets from Norman McLaren. Where does McLaren go from here? In his early days he dreamed of making an all-painted film. This dream became reality with "Begone Dull Care."*

*But today there is no ideal film which he dreams about.*

**REPORTER:** So it's, "The next film I make is the film I dream about."

**NORMAN McLAREN:** Yes, I would say that sums it up, pretty much.

*As for the general question of the future of animated film, McLaren does not see it essentially changing, although he sees greater exploitation of it in scientific films. Whatever does happen to animation films—which, incidentally, McLaren sees as a branch of film-making and not as an independent art form—McLaren's influence has been immeasurable. And on a more universal level, he has given pleasure to people all around the world. For myself, I cannot count how many times I have seen most of his films. Each time is discovery and joy. It's as Tom Daly of the N.F.B. said: "Norman McLaren so often succeeds in brushing aside the accumulated blinkers and dark glasses that have come to restrict our original child-like vision."*

*It's as Len Lye wrote: "So I'm for Norman McLaren. I don't think we can appreciate him enough."*

## McLaren Films available from National Film Board

**DIRECT WORK ON FILM (DRAWING, PAINTING, ENGRAVING):** Begone Dull Care, Blinkety Blank, Boogie-Doodle, Dots, Fiddle-de-Dee, Hen Hop, Hoppity Pop, Lines (Horizontal and Vertical), Loops, Mosaic, Serenai, Short and Suite, Stars and Stripes.

**PIXILLATION (ANIMATION TECHNIQUE USING LIVE ACTORS):** Canon, A Chairy Tale, Neighbors, Opening Speech, Two Bagatelles.

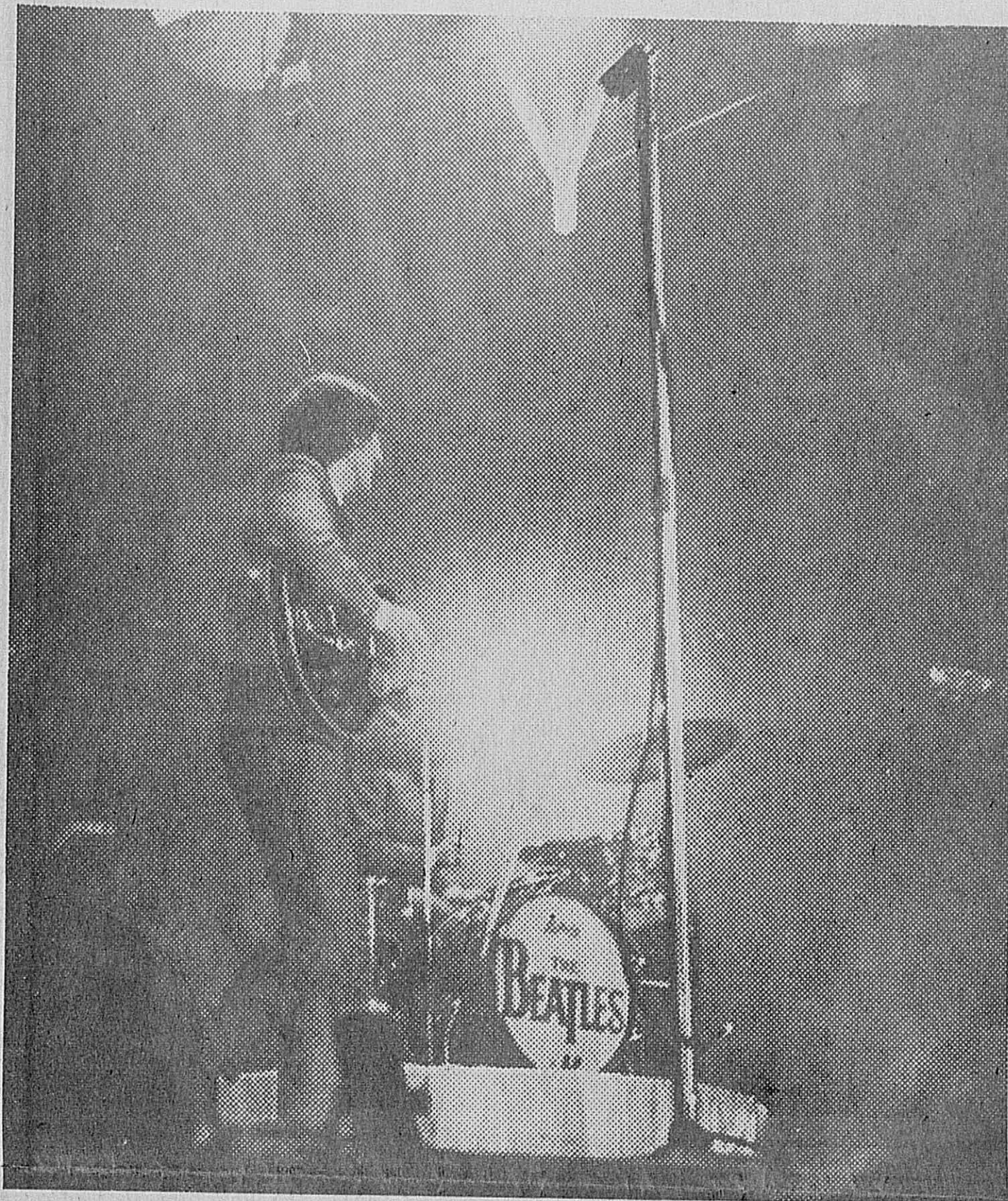
**ANIMATED CUTOUTS:** Le Merle, Rhythmic.

**PHOTOGRAPHED FROM PASTEL DRAWINGS:** A Phantasy, La Poulette Grise.

**MULTIPLE IMAGE LIVE ACTION:** Pas de Deux.

**Mr. McWilliams, who is an English teacher in Burlington, Ontario, may be remembered for his article "Film Literate Kids" which appeared in the October 21, 1968 issue of the Reporter. The article reported on a grades seven and eight project which produced a cameraless film by borrowing from the techniques of Norman McLaren.**





# REVOLUTION & ROCK, STONES & BEATLES

by Juan Rodriguez

It is becoming increasingly fashionable these days to associate rock 'n' roll music with student revolt, anti-war protests and the general tide of dissatisfaction among young people today. This is only natural; every movement has had a need for anthems and troubadours. One can only look back to the days of the Spanish Civil War and WW II and the activities of such people as Woody Guthrie and Pete Seeger ("This machine kills fascists") a sticker on Guthrie's guitar announced). Today, a good deal of rock music is deliberately appealing to the so-called "revolutionary" sensibilities of young people.

Unfortunately, this trend does have its unsavory aspects, and one of these is the tendency for rock critics to see rock music purely in a political or revolutionary context. Not only does this lead to spurious critical thought, but it also bars the way for any clear understanding of what is happening in rock music today.

A few months ago, the Beatles' "Revolution" and the Rolling Stones' "Street Fighting Man" were released almost simultaneously and, of course, the two songs practically invited comparison. "Revolution" seemed to be a nasty put-down of the kids who "wanna change the world" and thus the critics typecast the Beatles as businessmen and bureaucrats and pawns of the establishment. The Stones were portrayed as "musical anarchists" and "harbingers of chaos"; their song was banned from Top 40 radio and so the kids all thought this was groovy and that naturally their song was better than the Beatles'. In a *Ramparts* review, Susan Lydon puts it this way: "It is no longer a matter of music but rather one of betrayal. They [the Beatles] come off with a whining affirmation of their own values—all you need is love—while the kids build barricades in the streets and the cops bash heads." More recently, in comparing the two latest albums, "The Beatles" and the Stones' "Beg-

gars Banquet", Jon Landau of *Mayday* writes: "More and more it seems that the Beatles have used parody on this album precisely because they are afraid of confronting reality. It becomes a mask behind which they can hide from the urgencies of the moment . . . That song ['Revolution'], with its defensive and smug finger pointing at the European student left, shows the aridness and banality of the Beatles as 'serious lyricists.'" Of the Stones, Landau writes, "They create a panoramic view of how the reality of 1969 will appear to many of the young. And in their music, the themes of violence and politics necessarily take precedence over all others."

It seems to me that this type of criticism does little to shed light on what both the Beatles and Stones are really getting at. By refusing to see beyond the limited insurgent vs. establishment stereotypes, the new rock critics have not come to terms with the music itself, which is far from being strictly political.

The differences between the Beatles and the Stones are basic, and they reflect the various approaches they maintain towards their songs. Since the hysterical yeah-yeah days, the Beatles have sought privacy and tranquility; the Stones have been more outgoing and flamboyant. On record, the Beatles have tried to express something quite *abstract*; the Stones' songs are expressions of *themselves*. This is the basic difference. One might even say that the Beatles are artists while the Stones are poets. Nowhere are the values of their differences more evident than in their albums.

It is true that the Beatles are not singing "about" reality, nor are they offering social or political comment. In a sense, many Beatles' songs do not have any clear, definitive "message" at all. The Beatles make their greater contribution in the way that they *perceive* reality. It is the modes of perception and communication that shine in their new album. Many critics have dismissed "The Beatles"

as a flippant, light album; it was just too tongue-in-cheek to be any good. But the really important aspect of the new album is the way the Beatles have used satire and parody not as an end in itself but as a means of perception, as a way of telling a story. Thus, a song like "Rocky Raccoon" starts off as a witty parody of the cliché of folksy-balladeering, complete with Western accent and all. This parody is injected to define and clarify the idiom of the song. When the parody stops, a fascinating tragedy unfolds. As a result, "Rocky Raccoon" is a totally serious, even sensitive, ballad. Similarly, "Back In The U.S.S.R.," what with its spoofing of the travelogue-like lyrics of vintage Chuck Berry songs, provides a unique contrast between one kind of reality (Russia) and another (America).

There are many songs like this on the Beatles album. What Landau calls "cute" and "superficial" represents the Beatles' finest explorations into various modes of communication. The Beatles have transcended the put-on for its own sake. Instead, the album explodes our sensibilities.

The Rolling Stones are doing the same thing they have always done, except now they are attracting "serious" attention from the critics. In these times of confrontation and confusion it would seem that the Stones are surely musical anarchists, that they are the spokesmen for those behind the barricades. It is an easy assumption to make, but it merely boils down to nothing more than wishful thinking.

"Beggars Banquet" is a progression of what the Stones have been doing for years. They have established for themselves a cliché—that of dissatisfaction, sex, violence, toughness—and they have constantly been exploring the realities of this cliché. In many senses (particularly in respect to their numerous confrontations with the police) the Stones also *live* this cliché. It is the Stones Style that weighs heavily and their style is not politically orientated. If the Stones sing about rogues and outcasts, they

do not sing from an ideologue's point of view; they sing of them because they picture *themselves* as outcasts. If a song like "Sympathy For The Devil" is a panoramic view of history it is because the Stones see themselves as part of that history. Apart from "Street Fighting Man" (which is almost a plea of futility than a political statement) it is difficult to locate any songs on "Beggars Banquet" that could be measured in a political context. True enough, the album is marked with a violent spirit, but its other characteristics also include lustiness, crudeness and even a certain kind of tenderness. The Stones are confronting reality—but it is *their* reality, not necessarily the realities of your average up-against-the-wall political polemicists.

As for the Beatles now-notorious "Revolution", it seems to me that it is more of a philosophical argument than a political position. Here the Beatles are talking about a way of arriving at conclusions. They say "you better free your mind" instead of gazing at pictures of Chairman Mao. The fact that the Beatles are not particularly enamored with the politics of revolution should not make their songs any less valid. Surely the Beatles are not *expected* to provide the "movement" with suitable anthems.

Unfortunately, movements involving a mass of people dedicated towards the same goal are always bound to be basically conservative in outlook. Their approach to art is often downright philistine. And the young rebels of today are no exception: they condemn the Beatles for being non-political (i.e. Trivial) and the Stones are hailed because of the supposedly political (i.e. Important) temper of their music. This moronic outlook neither befits an appreciation of both the Beatles and the Stones (for surely their differences are to be *cherished*) nor does it further the critical process.

## POET'S CORNER

# IF IT WERE SPRING

apologies  
to

L. Cohen

by Sandy McIlwain

if it were spring  
and I wrote you love notes  
then would you know me  
or only that I wrote  
the songs?

would my soft words  
send you crying "author!"  
through the streets  
or just be another brother  
of your beauty?

(some drug-crazed hippie  
on an acid high  
offering to you  
the stars the sky  
and his transient world)

when you're just down  
from a sour affair  
whose memory tells you  
not to care  
for any fresh insanity

besides your work might slip  
if you took a chance  
on this long-haired junkie  
who thinks he can dance  
on a highway of roses

you'd be better as an ornament  
on a grad student's diet  
than a chick for a poet  
who'd rather have quiet  
than convenient conversation

who wants the attention  
that you've always had first  
and can't give you much back  
but simple verse  
and questions

if it were spring  
and I wrote you love notes  
would you then know me  
or only that I wrote  
songs for you?

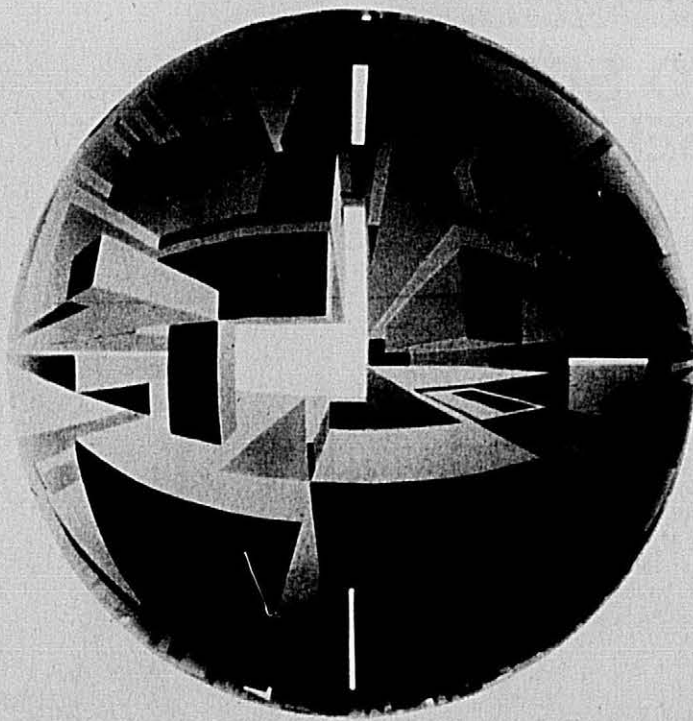


Pierre Gaboriau was born in 1935. After a year of study at the graphics institute, College Estienne, in Paris, he returned to Montreal in 1954 and began his studies at the Ecole des Beaux-Arts. In 1959 he received the Prix du Consul général de France.

Since his first one-man show in 1960, Gaboriau's appearances in the art world have been varied. He was responsible for the environmental design of Citerama at Expo '67, has collaborated on the experimental theatre work at the Revue Theatre and created the mural in the Berri-deMontigny Metro station.

In Gaboriau's painting, two strikingly different styles can be distinguished: the architectural perspectives and the abstract free-form series of which the eighty-foot mural in the lobby of the Laurentian Hotel is an example.

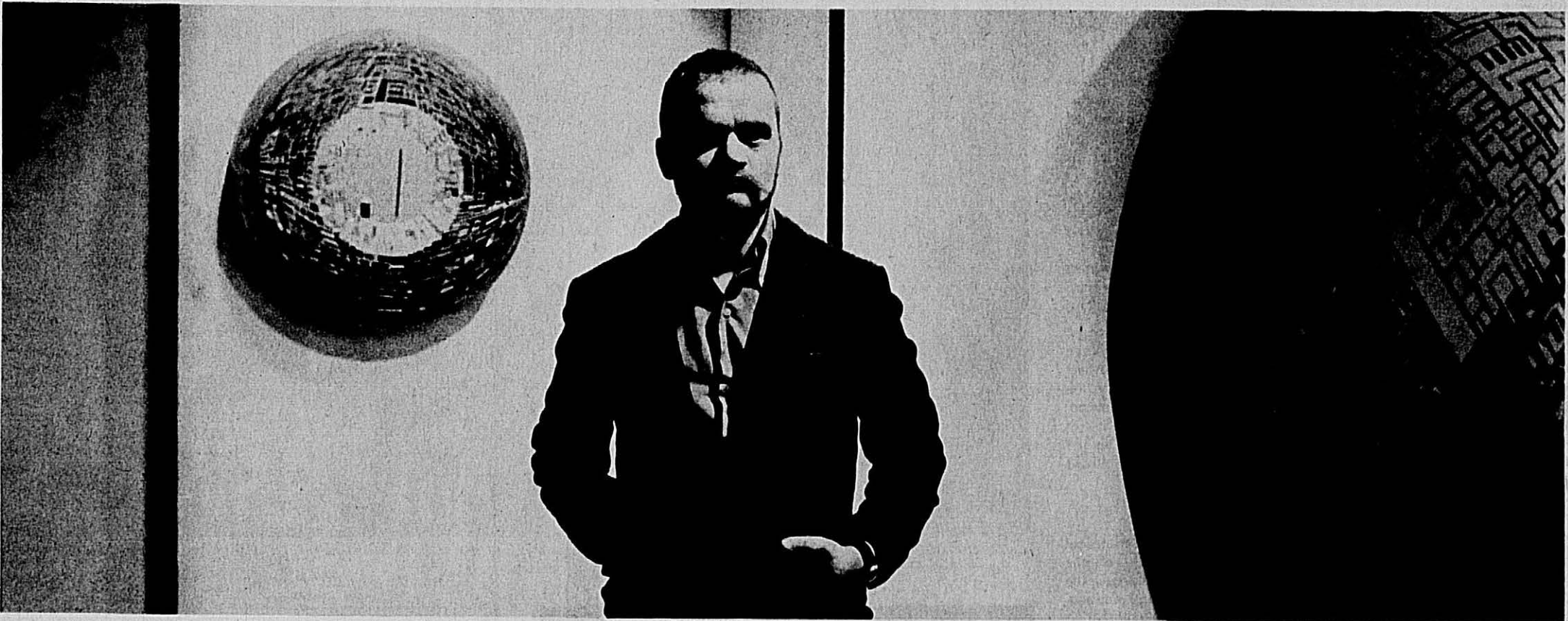
Gaboriau has paintings in the collections of the National Gallery in Ottawa, le Musée d'Art contemporain, and private collections in Montreal, Toronto, Boston and Chicago. More of his work can be seen at the Sherbrooke Gallery and the Musée d'Art contemporain at Cité du Havre.



#### PERSPECTIVE

"The whole thing is floating—you have space underneath, instead of on top. No gravity, no ups and downs. The vanishing point into infinity."

"It gives me a fantastic feeling that everything is floating like that, masses of things with lots of freedom and intricacy. I feel myself travelling through these things, shapes on shapes, discovering new worlds."



## NEAR AND FAR

by Merrily Paskal

The weird, futuristic world of Pierre Gaboriau is on exhibit at the Sherbrooke Gallery, and in the Berri-deMontigny Subway Station. In two-dimensional paintings, he would make a real cosmos. He would make his form-trip as sensually dramatic as technology.

The environmental artist's communication is psychosensual. The higher the definition—forms, colors, sounds, kinetics, tactility—the greater the involvement. McLuhan's formula is prejudiced for a cerebral kind of meaning: low definition stimulates imagination, makes involvement. Not so, Gaboriau. Psychosensual meaning can be Hot Abstract.

**GABORIAU:** In my new paintings, I'm trying to form an image where you see a multitude of free forms on a circle. After seeing what seems to be a disorganization, you see very strong sets of structures. The perspective is that of a fish-eye lens with four vanishing points on the sides and one in the centre, and the coloring is always organized consistently. In my new paintings, I'm trying to make the viewer less conscious of the structures, while conscious of vertigo, of travelling, of endless movement through endless forms, into infinities. I get a kick out of playing with rigid rules and within the rules finding fantastic freedom.

**REPORTER:** Pierre, do you say these things to yourself before you make a painting? Do you put words on your feelings before you make a painting about these feelings?

**GABORIAU:** No.

**REPORTER:** How does it work?

**GABORIAU:** I'm not verbal. I don't paint the words.

**REPORTER:** You see it before you?

**GABORIAU:** I don't see in perfection, because if I did, I wouldn't have started the paintings I'm doing today. I started pretty slowly. You should see my first perspectives. They're pretty meagre compared to what I'm doing today.

**REPORTER:** How do you mean, meagre?

**GABORIAU:** Weak, unrich. Actually, my paintings are, in a way, voluptuous.

**REPORTER:** Voluptuous?

**GABORIAU:** Really sexual, and a lot of mystery.

**REPORTER:** Where do you go from here?

**GABORIAU:** Actually, I look on my paintings as a stepping stone towards the animation techniques I've always dreamed of using. My ultimate medium would be animation combined with sounds to emphasize the movements, to emphasize the color, the texture.

**REPORTER:** Why would you want to use film?

**GABORIAU:** Because then the

change, the movement, would be real, wouldn't be just an illusion like it is now. Well, actually, film is also an illusion. It isn't reality, but it is still much closer to reality than a painting is, because at least you have the concretization of the fourth dimension, time. Painting, of course, is a static time.

**REPORTER:** What would you do? Would you adapt your painting?

**GABORIAU:** In the ordinary set-up of an animation studio, it would be a fantastic amount of work. Suppose I want to travel in my painting from right to left. That's an example of parallax which is tremendous work to do in the studio. Every different picture would have to be re-drawn completely. I mean, you couldn't use any tricks or anything like that. So the only way to do it would be to design a three-dimensional grid and shove it into an IBM machine and let it do the drawing. I would put on the grid a plan of the blocks at a certain point, and then on the three-dimensional grid, I would put

another design. I would tell the machine that from this grid to this grid—fill it, make the movement. I think the machine could do it.

**REPORTER:** Tell us why your paintings can't be sculptures, why they have to be films, for the illusion that you're creating to come across properly.

**GABORIAU:** Well, ideally, they should be sculptures and these sculptures should be done in space where there is no gravity, no ups, no downs, nothing. One of my blocks would then be the size of the island of Montreal. That would be great, because when you come close to them they would be fantastically huge, but far away, they would look small. You travel to these things completely disproportionate to your views, to what you're used to seeing. The worst thing, actually, is painting, but that's the only thing I can afford to do.

**REPORTER:** Why is it the worst thing?

**GABORIAU:** Because there are too many illusions in it. I mean, you have

the illusion of movement, but you don't really have the movement; there's no movement.

**REPORTER:** You can move into it with your eye, but you can't move into it physically?

**GABORIAU:** Yes. You can't move into it physically, and there's the illusion of the three-dimensional. The next best thing would be a film, even though it too, is two-dimensional. Sculpture would be the ideal thing because nothing would be an illusion anymore. It would be real. You could walk in it, touch it, zoom over it, fly jet aircraft all over the place, see it at any angle whatsoever, far, close.

**REPORTER:** When you say film, would you want cinerama?

**GABORIAU:** Oh, definitely. The ideal thing, again, would be a bubble-room and projections everywhere. You would be floating in the middle of this bubble, of this sphere on an air cushion.

## Claude Champagne

by Marvin Duchow

Claude Champagne received his musical education in Montreal and Paris and made many contributions to Canadian music and music education. He was co-founder of the Conservatoire de Musique de la Province de Quebec in 1943 and its Vice-Director, under Wilfrid Pelletier, until a few years before his death. He also taught at the Ecole Normale and at the Ecole de Musique Vincent d'Indy which has named its Salle Claude Champagne after him.

Casting a backward glance at Canadian music of some thirty-odd years ago, we might liken it to a secluded mountain stream—source of the wide and many-pronged river that is the Canadian music of today. An art serenely unaffected by the disruptive issues then stirring the musical world-at-large, it was a music content to dwell with quiet voice upon simple, native themes. Reflecting prevalent attitudes of national insularity, Canadian composers of the day were indifferent to, or perhaps were wholly unaware of, the problems posed by a disintegrating tonal system. They were, in any

case, impelled to write a music unproblematical in character and spontaneously folkloric with respect to inspirational source. Among the very few enduring works of that bucolic phase of Canadian music is the group of early masterpieces from the pen of Claude Champagne.

Of these works, perhaps the least familiar is the cantata-like "Images du Canada Français", a large-scale musical tableau that evokes the atmosphere of Old Canada with all of the warmth, colour, and simple naturalism of a Krieghoff painting. The "Danse Villageoise"—easily the most popular of all Canadian compositions—has withstood the cruel test of unceasing repetition, retaining untarnished its air of jaunty innocence throughout its innumerable performances in whichever of its several versions. Different again, and quite removed from any spirit of parody, is the artless simplicity of expression that characterizes the folk song arrangements for male voices—each a miniature gem of polished craftsmanship. Deservedly preeminent within the corpus of Champagne's early works is the deftly-textured "Suite Canadienne", which brings to mind the piquant and sophisticated art of the sixteenth century chanson, of which it is surely the most felicitous and original of reincarnations.

In Canada, as elsewhere, the post-war period witnessed an intensifica-

tion of industrial and urban development that would soon render the premises of an earlier period no longer tenable. The resultant reassessment of traditional values, today so clearly an animating force in our political life, was already affecting Canadian musical thought and expression in the early 'forties'. As early as 1942, a French-Canadian journal carried an article criticizing the cult of musical nationalism, and exhorting French-Canada to adopt a more contemporary musical vocabulary and to strive for a more cosmopolitan artistic orientation. This manifesto crystallized a trend. The subsequent history of at least French-Canadian music, in a sense, a chronicle of the dissemination and implementation of ideas expressed in that document. The swollen streamlet of Canadian music was soon to become a swiftly-flowing river.

While continuing to write lighter works in more conventional vein, Claude Champagne met the challenge of these new developments in three major works embodying two divergent tendencies. In the "Symphonie Gaspésienne", the earlier and more literal phase of his musical nationalism gave way to a more internalized and thus, through a not surprising paradox, to a more universalized expression thereof. Avoiding literal quotation of folk song melodies, but still adhering to a conventional idiom, Champagne created in this

work a tone poem of spacious proportions, encompassing passages of picturesque delineation as well as of noble and introspective lyricism. Unquestionably one of Champagne's most imposing creations, the "Symphonie Gaspésienne", stands as a monument embodying his deeply felt vision of the physical and spiritual beauty of his native land.

In contrast, a quite different direction was taken in the "String Quartet", a work at once abstract in design intensive in expression and highly dissonant in sonority and idiom. SERGE GARANT has found in this shamefully neglected score a spare romanticism, an intense and vital lyricism, reminiscent of the early pre-serial works of Schoenberg and of Alban Berg. Possibly some affinity with the Viennese school is latent even in its contrapuntally generated dissonance and in its distinctively fastidious craftsmanship. However, despite its evident responsiveness to contemporary musical developments, the Quartet remains a work of genuine originality of conception and expression.

In "Altitude", his last major work, Champagne reconciled the divergent tendencies of the two works previously mentioned. Subtitled "Fresque sonore inspirée du spectacle des Montagnes Rocheuses", "Altitude" stands in direct lineage to the "Symphonie Gaspésienne" as a

work of descriptive and poetic intent. Here, for the last time, Champagne found inspiration in both the physical and spiritual aspects of the land he so deeply loved. Here, however, the spur of native sentiment is elevated to a mood of almost pantheistic universality. Significantly, too, its musical language bears a more contemporary stamp than does that of its earlier counterpart.

Champagne's imaginative and distinctly personalized response to the musical challenge of the 'forties and the 'fifties was not confined to the realm of creative composition. During those exciting decades he also played an enormously productive role, as teacher and as administrator, in shaping both the contemporary and the future course of musical development in French-Canada.

In this teaching, Champagne's guiding principle was that of individualized creative expression. It signified an obligation to approach even the humblest counterpoint exercise with a clear grasp, and with resourceful exploitation of its linear, its combinatorial, and its expressive possibilities. Understanding as perceptively as he did the generative force of contrapuntal movement at all levels of musical organization, Champagne had little sympathy for those who dismissed the acquisition of its fundamental techniques as a tedious and irksome chore.

One of Champagne's distinctive gifts as pedagogue was his extraordinary power of empathic insight, that is, his power to project imaginatively his own consciousness into the ideational world of each individual student. No less admirable was his ability and readiness to share with others his own profound sense of exhilaration in the musical experience as such.

Given these and many similar qualities, it is not surprising that from his studio, as well as from his many institutional classes, emerged a whole generation of French-Canadian composers committed to principles of artistic independence. To list their names—Binet, GARANT, Matton, MOREL, TREMBLAY, and many others—is to suggest how broad is the spectrum that embraces their respective styles. By the same token, to do so is to underline the vital role played by Claude Champagne, the gifted and perceptive teacher, in shaping the course of French-Canadian music of today. Closing with our original metaphor, we may well observe that from the gentle mountain stream had indeed emerged a proudly flowing and many branched river.

Dr. Duchow is a well-known composer and Professor of Music at McGill University

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## STUDENTS TO SIT ON DEANS' SELECTION

Senate has accorded students representation on advisory committees for the selection of Deans, but it took over three solid hours of discussion and debate to do it, at a special meeting in the Leacock Building last Thursday evening.

It all began quite innocently, with Prof. Dalbir Bindra's motion to allow for student membership on the advisory committees "as full participating members." But before Senate could finally vote on this original motion, it:

Defeated an amendment by Senator Ian Hyman;  
Carried an amendment by Senator P. R. Wallace;  
Defeated a sub-amendment by Senator Peter Foster;  
Defeated a sub-amendment by Senator H. J. Maitre;  
Defeated a sub-amendment by Senator S. B. Frost;  
Carried a sub-amendment by Senator M. K. Oliver;  
Defeated a sub-amendment by Senator Leo Yaffe.  
Heard a number of other amendments which never came to a vote.  
By this time it was 10.15 p.m., and Prof. Bindra's motion went through by a vote of 27 to 6.

### THE ACCOMPLISHMENTS

When the discussion had died down, Senate had accomplished the following:

Accorded representation to students on the advisory committees for the selection of five Deans—in Arts and Science; Agriculture; Law; Music; and Graduate Studies and Research;

Voted that student representatives on these advisory committees should be chosen by the students associations of the faculties in question and by the Students' Society concerned—McGill or Macdonald College;

Urged these student bodies to select representatives from amongst the names which had already been proposed to the Principal by the various faculty student associations;

Recommended that membership on the advisory committees be restricted to those who undertake to respect the confidentiality of the deliberations, without limiting the choice of a committee to hold certain meetings open;

Will recommend to the Board of Governors that student representation on the advisory committees be as follows—two students in the case of the larger faculties, one student in the case of the smaller faculties. In each case, one student is to be from the faculty concerned.

The students will be added to the existing committees which, in the case of the larger faculties are made up of no less than eight members (one-half from the faculty concerned, one-half from Senate) and in the case of the smaller faculties, two members from the faculty concerned, two members appointed by Senate.

In each case, these committees act in an advisory capacity to the Principal, who recommends the appointment of a Dean to the Board of Governors.

### "BALANCE" CHALLENGED

After clearing away the problem of student representation, Senate got down to the business of considering its own representatives on the selection committees for the Deans, but Mr. Hyman challenged the "balance" represented in the slate of names presented to the meeting. His views were opposed vigorously and the role of the nominating committee was praised by a number of Senators. When he proposed a replacement for one of the nominees, Senate voted to close the meeting, as discussion was being directed toward the consideration of members of staff. The meeting went into closed session at about 11:15 p.m.

D. H. Rocke Robertson, chairman of the meeting, which got under way shortly after 7.00 p.m., commenced the proceedings by pointing out that the question of advisory committees for the appointment of Deans had been before Senate for a long time and a firm decision was necessary.

Prof. Bindra's motion followed, and it was made clear that the motion referred to interim, ad hoc arrangement; the long-range problems on the selection of Deans had been referred to the Committee to Maintain a Continuing Review of University Government at the previous meeting or Senate.

The Hyman amendment, contained in a letter circulated to Senate by Robert Hajaly, asked "that the Committee for the Continual Review of University Government be discharged of considering the question of selection of Deans, and that this be taken up immediately by Senate."

Both Dean Cohen and Prof. Oliver argued that it was necessary for the Committee to study the various approaches to the issue of student representation on selection committees and that the main problem was to relate the present discussion to the report of the Nominating Committee dealing with the selection committees, which had been held over from the previous meeting of Senate.

Mr. Hyman's amendment was defeated and the meeting returned to a consideration of the original motion.

Professor Colin Gordon attempted to get the motion put to the vote, pointing out that members of Senate had been considering the problems for a long time, and that their minds were made up on the question. His move was unsuccessful and Prof. Wallace's amendment followed. This was to the effect that student representatives on the advisory committees should be chosen by the student association of the faculty in question.

Some discomfort was expressed at this new idea, and when Prof. Bindra offered to incorporate it into his motion, Prof. Oliver, who had seconded the original motion, refused to accept it.

Mr. Foster then entered the discussion, saying that "student representation on the committee has to be significant" and that students on the committees had to be accountable to the student bodies they represented. He then proposed his sub-amendment, which added to the proposal that student representatives be chosen by the faculty students' association and the Students' Societies (McGill or Macdonald), and that this representation should be effective, in terms of numbers. Prof. Wallace offered, and it was agreed, to incorporate the first part of Mr. Foster's sub-amendment into his amendment, but the section dealing with "numerically effective" representation was lost.

After further discussion, Prof. Maitre offered a sub-amendment proposing that student representatives be elected from among all the students in the faculty association concerned. Both Dr. Robertson and Prof. Oliver pointed out the practical difficulties this move would present in view of the fact that the University was approaching the close of the academic year. The sub-amendment was defeated.

Just prior to this Dr. Robertson pointed out that he had already received letters from the various faculty students associations nominating representatives for the various Dean's selection committees. He said he hoped Senate might accept the nominations which had been made. Prof. Oliver later submitted his sub-amendment asking Senate to urge the student bodies concerned to select their representatives from among these names which had been submitted to the Principal.

An amendment proposed by Prof. Yaffe called for the Principal to consult with two committees in selecting Deans—a committee of faculty members, as required by Senate; and a committee of students named by the faculty associations concerned. The amendment was lost.

There was some discussion on the number of student representatives to be recommended for the selection committees and Mr. Hajaly protested when it was learned that they would constitute one-fifth of the committees. Prof. Pavlasek objected to the implication that faculty did not represent the interests of students and he said that claims for parity were only a "gambit".

A. A. Tunis



A WALKING TOUR OF OLD MONTREAL, sponsored by the Women Associates, will take in some of the buildings visible in this engraving from the Canadian Illustrated News of Saturday, July 22, 1871. See Tuesday for details.

## coming events

28 APRIL TO 3 MAY

Send notices, photos, of Coming Events to: Joy Macurdy, 392-5306, Information Office, McGill—by Tuesday, 5 p.m., one week in advance.

### MONDAY 28

**CURRICULUM REVIEW COMMISSION:** Open meeting, 9:30 a.m., Room 207, Dawson Hall.

**INSTANTHEATRE:** "Salade à la Russe," a miscellany of Russian humour, poetry and music. Compiled by journalist Michael Solomon. 12:00, 12:40 and 1:20 p.m., Place Ville Marie. 878-2589.

**CONSERVATOIRE DE MUSIQUE DE MONTREAL:** Audition de concours de harpe—Margot Morris, classe de Mme. Dorothy Weldon Masella. 3 p.m., Salle du Plateau.

**VERDI REPERTORY CINEMA:** "La Collectionneuse," and "Trans-Europ-Express." 5380 St. Laurent Blvd. 277-4145. Through April 29.

### TUESDAY 29

**WOMEN ASSOCIATES:** Walking tour of Old Montreal. Meet at Chateau de Ramzay, 290 Notre Dame E., at 10:30 a.m. Lunch afterwards. Further information, Mrs. Caves, 844-9691.

**CONSERVATOIRE:** Audition de concours de violoncelle—Armine Alexanian et Grant Cameron, classe de M. Walter Joachim. 1 p.m., Salle du Plateau.

**SEVEN WONDERS OF THE UNIVERSE:** Dow Planetarium sky show opens today, continues through June 15. 1000 St. Jacques W. Information, 872-4210.

### WEDNESDAY 30

**CINÉMUSE:** "Pet Holec Na Krku" (Saddled with Five Girls), Czechoslovakian film made in 1967. English sub-titles. 6 and 8:30 p.m., Museum of Fine Arts. Admission free.

**WOMEN ASSOCIATES:** French Conversation Group, 2 p.m., Peterson Hall. 731-7021.

**NFB PUBLIC SCREENING:** "Nine Minutes," (Thomas Vámos, Jacques Bobet, 9 mins., color). "Three Fisherman," (Julian Biggs, 28 mins., b. & w.). "Are You Warm to the Touch?" (Crawley Films, 14 mins., color). "You Are Welcome Sirs, to Cyprus," (Richard Gilbert, Hector J. Lemieux, 20 mins., color). "What On Earth," (Kaj Pindal, Robert Verral, Wolf Koenig, 9 mins., animation). Dorval Cultural Centre, 8 p.m. 631-3575.

**VERDI REPERTORY CINEMA:** Orson Welles' "Falstaff." 5380 St. Laurent Blvd. 277-4145.

**UNIVERSITY OF VERMONT:** Lecture "Acoustics, Old and New," by Dr. R. Bruce Lindsay, (Hazard Professor of Physics, Brown University). Room 104, Williams Science Hall, U. of V., Burlington, Vermont. Admission free.

### MAY DAY

**QUOAT-QUOAT:** Audiberti's satire, directed by Georges Vitaly of Paris. Theatre Maisonneuve. 8:30 p.m. To May 10.

**NFB PUBLIC SCREENING:** "The Work of Art," (Morten Parker, 31 min., color). "La Forme des Choses," (Jacques Giraldeau, 10 min., color). "Kurelek," (Bill Pettigrew, 10 min., color). "A la Recherche de l'Innocence," (Leonard Forest, 28 min., b. & w.). Botanical Gardens Auditorium, 4101 Sherbrooke St. E., 8 p.m. Admission free. 879-4823.

**SPECTROSCOPIC PROBES OF BIOPOLYMER CONFORMATION:** Lecture in Chemistry Department's Polymer Thursdays series. Speaker, Prof. W. C. Galley of McGill. 4:30 p.m., Room 10, Otto Maass Chemistry Building.

**JUILLIARD STRING QUARTET:** Dartmouth College, Spaulding Auditorium, Hanover, New Hampshire. 8:30 p.m.

### FRIDAY 2

**QUEEN'S UNIVERSITY:** Dept. of Continuing Medical Education sponsors workshop for physiotherapists and occupational therapists, on "Current Concepts in the Management of Patients with Arthritis and Allied Conditions." Teaching Room, Etherington Hall, Queen's University, Kingston, Ontario.

**IRANIAN STUDENTS ASSOCIATION:** Meeting at 8 p.m., University Centre, Room 123. Iranian music, plus lecture on "Tour of Bugestan and Sistan." In Persian. 288-0850.

**AFRICAN DREAM SONG:** Reading of poetry, drums and dance, by Prof. Barbara Jones. 9 p.m., Museum of Fine Arts. 842-8091.

### SATURDAY 3

**McGILL CHRISTIAN FELLOWSHIP:** Splash party, Currie Pool, 7 p.m. Meeting at University Centre afterwards, 8:30 p.m., Room 307.

**THE KEYBOARD WORLD OF BACH:** Lecture-demonstration by Reginald Godden, pianist. 4 p.m., Marianopolis College Lecture Hall, Peel and McGregor. Sponsored by the Royal Conservatory of Music Alumni.

**JAPANESE FILM FESTIVAL:** "Le Portrait de Madame Yuki," directed by Kanji Mizoguchi. French and English sub-titles. 8:30 p.m. Ciné-Weekend, 3860 St. Urbain, 274-7534.

EDITOR: HARRY E. THOMAS  
ASSISTANT EDITOR: STUART GILMAN  
SCIENCE EDITOR: TOM PASKAL  
ASSOCIATE EDITOR: JEAN-LOUIS ROY  
FRENCH CANADA STUDIES PROGRAMME  
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INFORMATION OFFICE:  
Albert A. Tunis, Director; H. E. Thomas, Suzanne Côté Margot Clark, Stuart Gilman, Gordon Thomson (Macdonald College), Robert Reid, Einar Vinje, and Chris Payne

McGill  
reporter